Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-46. (Canceled)

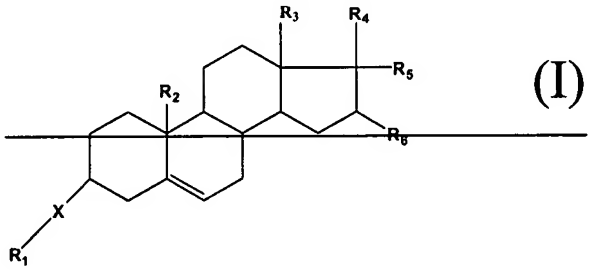
47. (Currently amended) A method of decreasing melanin production in a melanocyte, comprising contacting the melanocyte with an effective amount of a compound that effects an alteration in late endosomal/lysosomal trafficking in the melanocyte, the alteration resulting in a decrease in melanin production in the melanocyte, the method comprising contacting the melanocyte with a compound selected from the group consisting of

(a) progesterone,

(b) a hydrophobic amine selected from the group consisting of phenothiazine, and a tricyclic antidepressant,

(c) sphingosine, and

(d) a compound ~~of the formula~~ selected from the group consisting of:



(I)

~~wherein X is O or S;~~

~~R_1 is $-C(O)(C_1-C_6)$alkyl or $-(CH_2)_n-O-(C_1-C_6)$alkyl, or $-(CH_2)_n-NR_7R_8$ where n is 0-3, and where each of R_7 and R_8 are independently selected from H and (C_1-C_6)alkyl;~~

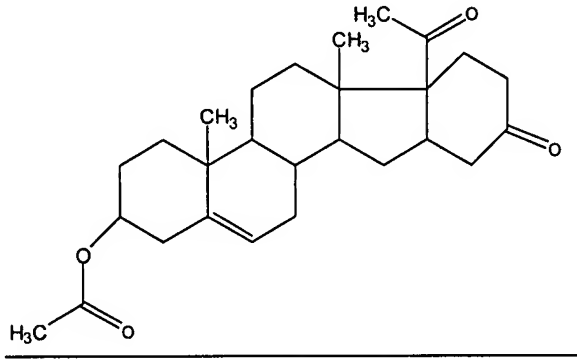
~~R_2 is H or (C_1-C_6)alkyl;~~

~~R_3 is H or (C_1-C_6)alkyl;~~

~~R_4 is $-C(O)(C_1-C_6)$alkyl;~~

~~R_5 is H or $-(C_1-C_6)$alkyl; or R_4 and R_5 together are =O; and~~

~~R_6 is H or $(C_1$-$C_6)$alkyl or $(CH_2)_n$-NR_9R_{10} where each of R_9 and R_{10} are independently selected from H and $(C_1$-$C_6)$alkyl; or R_5 and R_6 taken together with the carbon atoms to which they are attached form a C_5-C_8 carbocyclic ring, the ring being optionally substituted by one to three substituents selected from halogen, OH, $(C_1$-$C_6)$alkyl, C_1-$C_6)$alkoxy, amino, =O, $(C_1$-$C_6)$alkylamino, di-$(C_1$-$C_6)$alkyl)amino, trifluoromethyl, and OCF_3.~~



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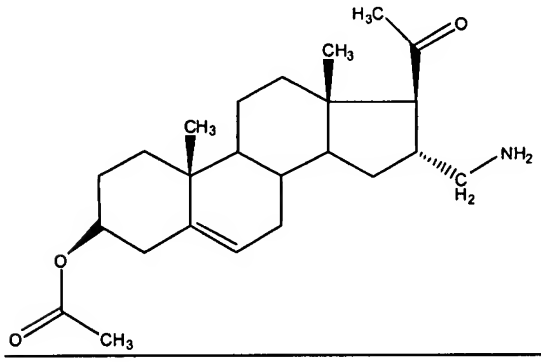

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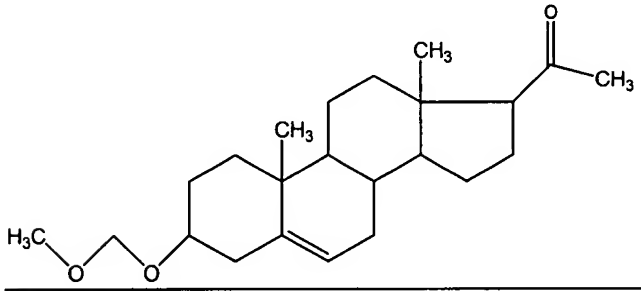

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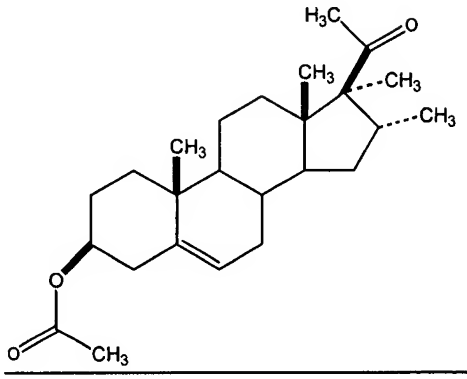
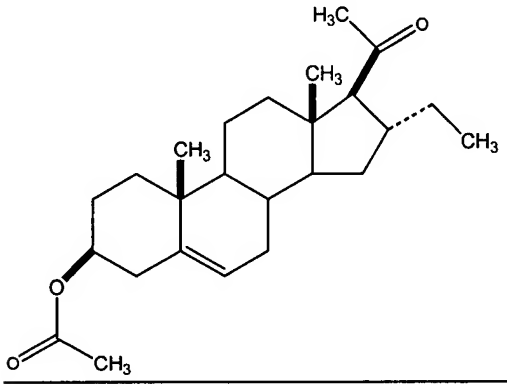
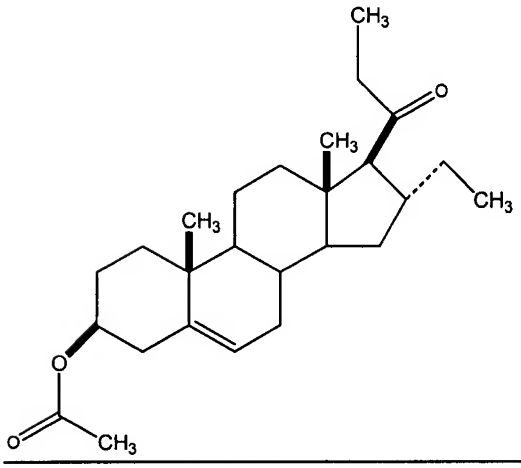


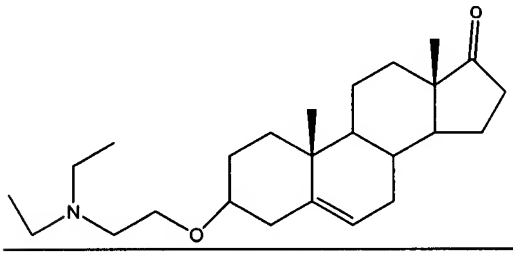
(V)



(VI)



(VII)



(VIII)

and a pharmaceutically acceptable salt or solvate thereof.

48. (Original) The method of claim 47, wherein the compound is progesterone.

49. (Previously presented) The method of claim 47, wherein the compound is a hydrophobic amine selected from the group consisting of a phenothiazine and a tricyclic antidepressant.

50. (Canceled)

51. (Previously presented) The method of claim 49, wherein the compound is a phenothiazine.

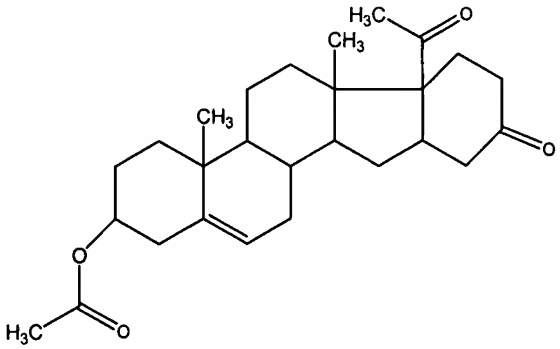
52. (Original) The method of claim 51, wherein the phenothiazine is selected from the group consisting of trifluoperazine, chlorpromazine, prochlorperazine, trifluprομazine, promazine, thioridazine, mesoridaine, piperacetazine, perphenazine, fluphenazine, acetophenazine, and thiethylperazine.

53. (Previously presented) The method of claim 49, wherein the compound is a tricyclic antidepressant.

54. (Original) The method of claim 53, wherein the tricyclic antidepressant is selected from the group consisting of imipramine, nortriptyline, protriptyline, trimipramine, and doxepin.

55. (Original) The method of claim 47, wherein the compound is sphingosine.

56. (Currently amended) The method of claim 47, wherein the compound is selected from the group consisting of:



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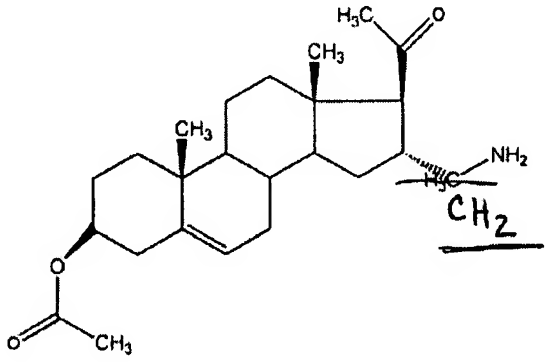

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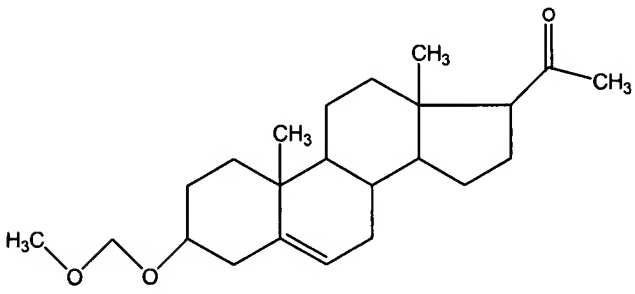

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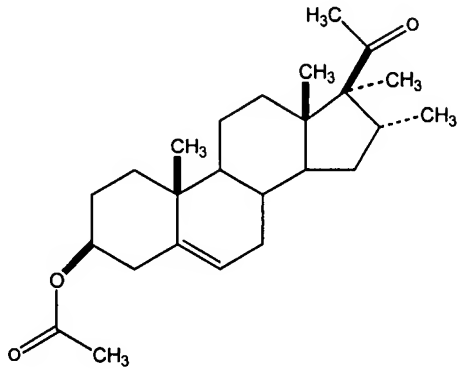

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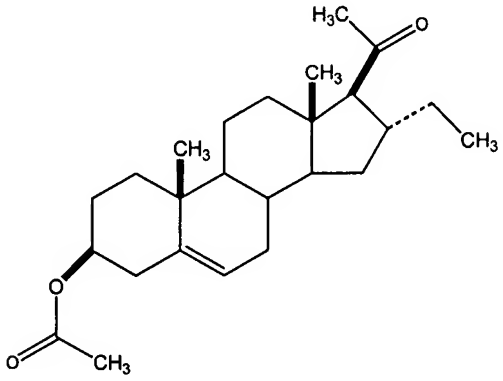

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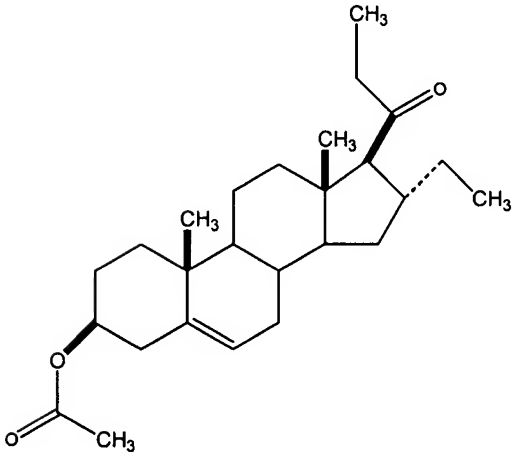

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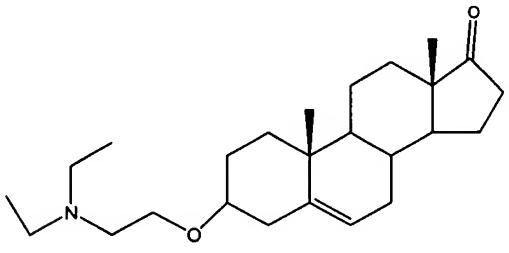


(VIII)

and a pharmaceutically acceptable salt or solvate thereof.

57-59. (Canceled)

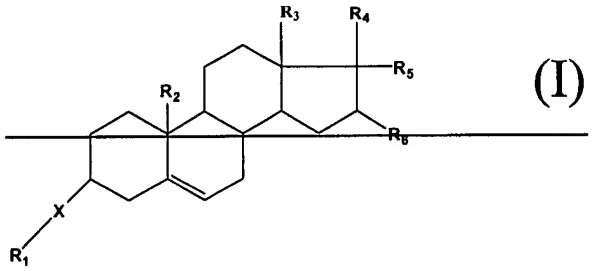
60. (Previously presented) A method of reducing skin pigmentation, comprising contacting skin with a pharmaceutically effective amount of a compound that effects an alteration in late endosomal/lysosomal trafficking, the alteration in late endosomal/lysosomal trafficking results in a reduction of skin pigmentation, the method comprising contacting the skin with a pharmaceutically effective amount of a compound selected from the group consisting of

(a) progesterone,

(b) a hydrophobic amine selected from the group consisting of phenothiazine, and a tricyclic antidepressant,

(c) sphingosine, and

(d) a compound ~~of the formula~~ selected from the group consisting of:



(I)

~~wherein X is O or S;~~

~~R_1 is $C(O)(C_1$-$C_6)$alkyl or $(CH_2)_n$-O-$(C_1$-$C_6)$alkyl, or $(CH_2)_n$-NR_7R_8 where n is 0-3, and where each of R_7 and R_8 are independently selected from H and $(C_1$-$C_6)$alkyl;~~

~~R_2 is H or $(C_1$-$C_6)$alkyl;~~

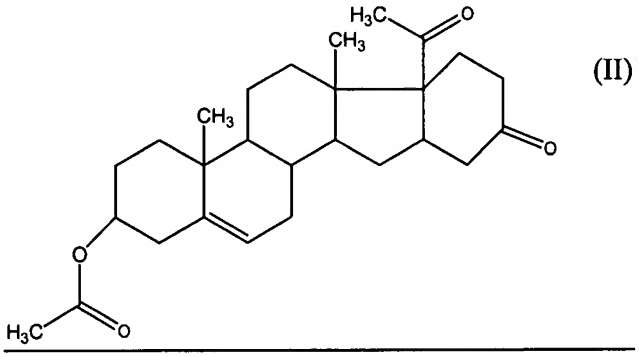
~~R_3 is H or $(C_1$-$C_6)$alkyl;~~

~~R4 is $C(O)(C1$-$C6)$alkyl;~~

~~R_5 is H or $(C_1$-$C_6)$alkyl; or R_4 and R_5 together are $=O$; and~~

~~R_6 is H or $(C_1$-$C_6)$alkyl or $(CH_2)_n$-NR_9R_{10} where each of R_9 and R_{10} are independently selected from H and $(C_1$-$C_6)$alkyl; or R_5 and R_6 taken together with the carbon atoms to which they are attached form a C_5-C_8 carbocyclic ring, the~~

~~ring being optionally substituted by one to three substituents selected from halogen, HH, (C_1-C_6)alkyl, $C_1-C_6)$alkoxy, amino, =O, (C_1-C_6)alkylamino, di (C_1-C_6)alkyl)amino, trifluoromethyl, and OCF_3.~~



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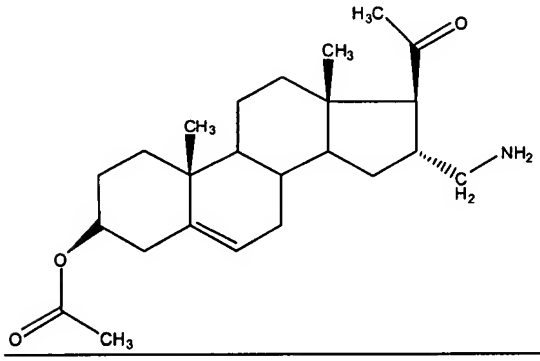

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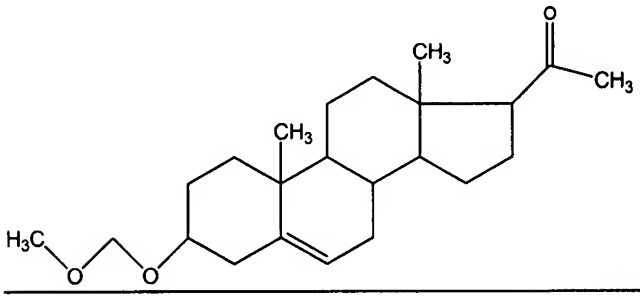

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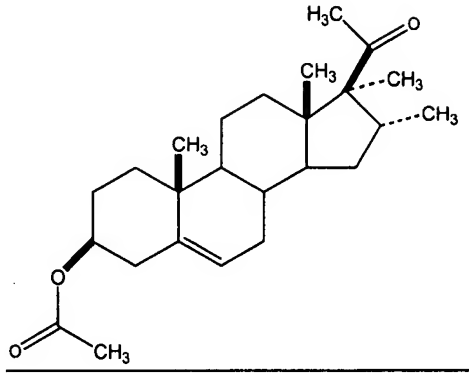
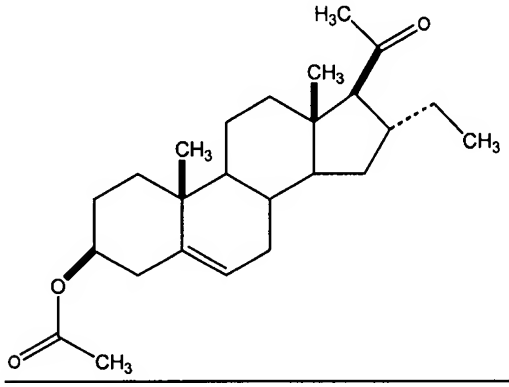
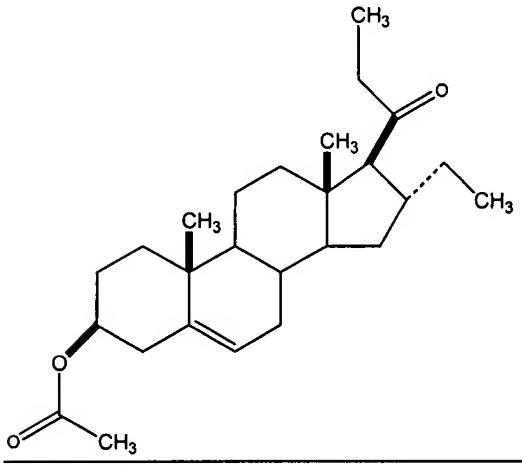

H3C
O
CH3
CH3
CH3
CH3
O
O
CH3

(V)


H3C
O
CH3
CH3
CH3
O
O
CH3

(VI)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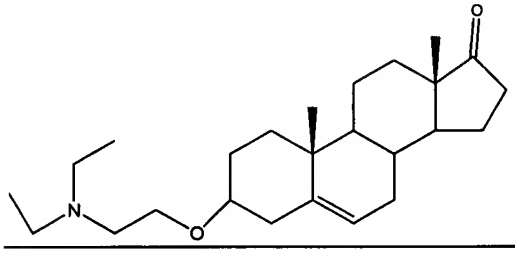
CH3
CH3
CH3
O
O
CH3

(VII)


O
N
O

(VIII)

and a pharmaceutically acceptable salt or solvate thereof.

61. (Original) The method of claim 60, wherein the compound is progesterone.

62. (Previously presented) The method of claim 60, wherein the compound is a hydrophobic amine selected from the group consisting of phenothiazine and a tricyclic antidepressant.

63. (Canceled)

64. (Previously presented) The method of claim 62, wherein the compound is a phenothiazine.

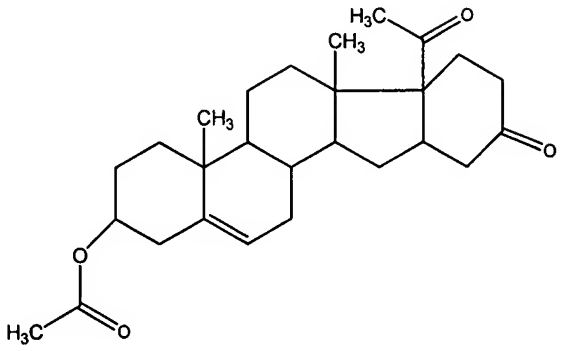
65. (Original) The method of claim 64, wherein the phenothiazine is selected from the group consisting of trifluoperazine, chlorpromazine, prochlorperazine, triflupromazine, promazine, thioridazine, mesoridaine, piperacetazine, perphenazine, fluphenazine, acetophenazine, and thiethylperazine.

66. (Previously presented) The method of claim 62, wherein the compound is a tricyclic antidepressant.

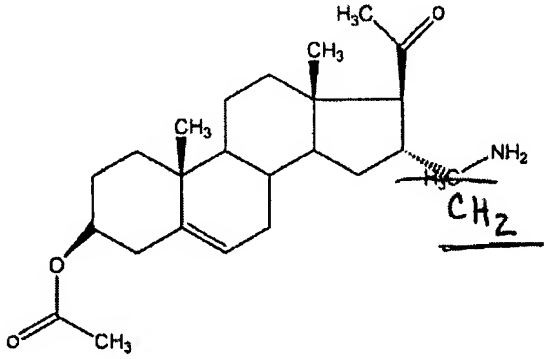
67. (Original) The method of claim 66, wherein the tricyclic antidepressant is selected from the group consisting of imipramine, nortriptyline, protriptyline, trimipramine, and doxepin.

68. (Original) The method of claim 60, wherein the compound is sphingosine.

69. (Currently amended) The method of claim 60, wherein the compound is selected from the group consisting of:



(II)



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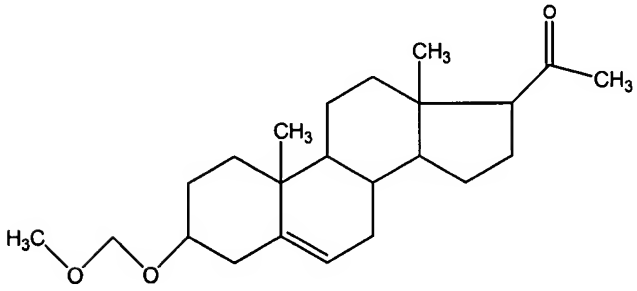

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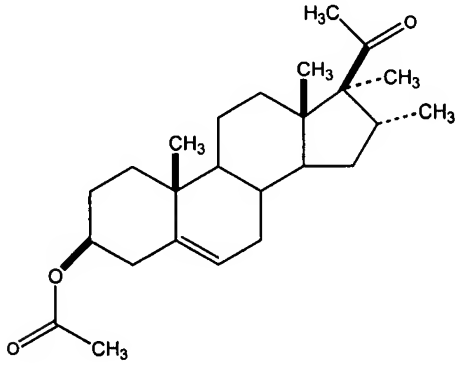

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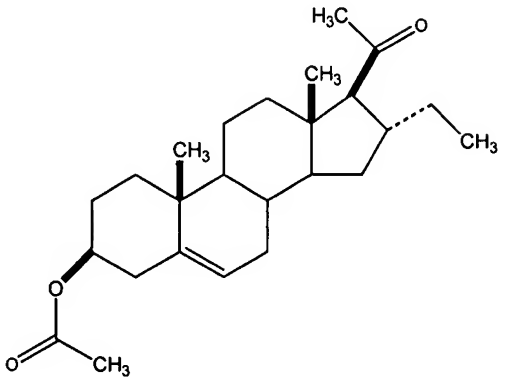

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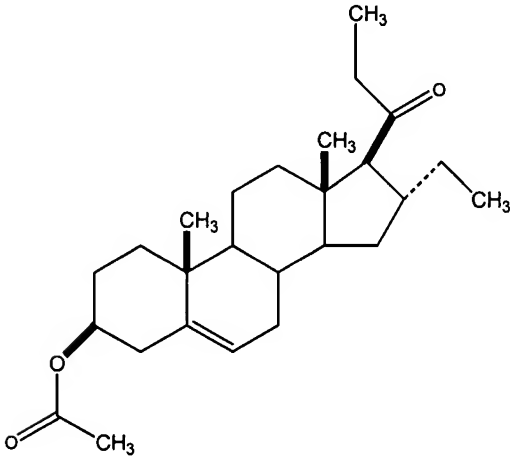

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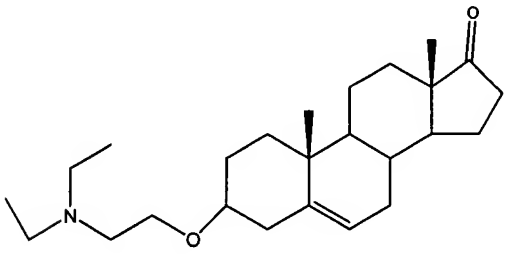

(VIII)

and a pharmaceutically acceptable salt or solvate thereof.

70-77. (Canceled)